

Request for Proposal
TERMS OF REFERENCE
Research Study on TVET & Skills Development
in the fields of Renewable Energy and Energy Efficiency

The UNESCO-UNEVOC International Centre based in Bonn, Germany, is issuing a request to submit a written proposal for the above-mentioned work.

I. TERMS OF REFERENCE

a. Objectives of the work / Rationale of the research initiative

The transition to a greener economy is impacting the skills requirements. There is an increasing demand for skilled workforce in industries that concern the production of environmentally-friendly materials or those activities that promote mitigation or adaptation of climate change impact. Some occupation sectors are either adapting to green practices or restructuring. Up-skilling across all sectors and occupations is increasingly seen vital to new knowledge and skills acquisition. Skills associated with the green economy are not always entirely new or "unique" skills. They combine transversal competences and "specific" skill sets. In some cases, certain tasks and responsibilities that require specific combinations of skills and knowledge, will form new occupational profiles (OECD, ILO 2012).

Facilitating the adaptation of the workforce and of education and training systems is needed to avoid skills bottlenecks, support occupational transitions and enhance the responsiveness of the education and training systems to emerging skill and qualification demands. This requires qualifications and curricular review and updates (CEDEFOP, 2012).

The shift to energy efficiency and use of renewables is one of the developments that have taken shape significantly over the past decade as more countries formulate their respective green growth strategies or shift to sustainable consumption and production. Specifically, the use of cleaner energy has increased, paving the way for new technologies and processes that promote sustainable solutions and societies. However, such transition cannot be facilitated in smooth way without the necessary technical skills to support low-carbon transition.

Within the framework of UNESCO-UNEVOC's project on Reinforcing National Capacities for Improving TVET Systems, Policies and Practices in Advancing Green Society and Economy, the UNESCO-UNEVOC promotes the significant role of TVET institutions in the Member States in preparing the workforce to support the skills needs in vital sectors such as renewable energy and energy efficiency fields.

UNESCO-UNEVOC seeks to organize a research undertaking that will focus on the skills needs in the Renewable Energy and Energy Efficiency fields. The initiative aims to investigate the systematic links of TVET and the energy sector, thereby establishing a better understanding of how the shift to renewable and alternative energy sources is impact skills demand. It further seeks to answer the following broad questions

1. What are the impacts of the shift to renewable energy and energy efficient alternatives to skills development/ education and training;
2. How can the greening of TVET institutions increase the opportunity to meet the skills needs?
3. Where are the cases of training for low-carbon transitions using RE/EE located and what do they mean to future initiatives?

4. How is the changing skills agenda enhancing the quality of skills and improving the career pathways of the young workforce in vital green industries.
5. What concrete actions can strengthen policy, teacher development, skills forecasting and training curriculum reforms in TVET?

As an output, a Discussion Paper shall be produced to provide a useful information resource. It shall reflect broad-ranging and transnational perspectives based on empirical data available, outcome of previous international studies and researches, actual cases as well as concepts from available literature on the topic. It is also expected to capture the latest developments in the field in relation to TVET to inform the global debate and support an evidence base for transforming TVET to meet the skills needs of low-carbon transitions. It shall represent a constructive discussion of the issue and offer opportunity for sharpening the understanding of the technical and vocational skills needed, the extent of curricular review and update required, the competency models based on industry needs, the technologies and applications for which TVET skills need to be trained/re-trained and alternatives for action.

b. Expected Output / Description of the work

On or before 31 May 2015 and on the basis of a commonly agreed proposal and outline, *the Contractor* shall

1. Conduct a research and/or meta-analysis of the broad pattern of up-take of renewable energy and energy efficient alternatives in countries in the various regions (*i.e., Africa, Asia-Pacific, Arab States, Europe and North America and Latin America*) vis-à-vis economic and environmental agenda
2. Produce sections that
 - 2.1 Establish the significant links of TVET with the field of Renewable Energy and Energy Efficient alternative
 - 2.2 Describe the impact of the shift to RE/EE resources in various countries to education and training;
 - 2.3 Elaborate RE/EE technologies and applications, specifically solar thermal energy, and the corresponding skills/skills set required;
 - 2.4 Elaborate the different approaches used in TVET in selected countries in relation to the skills needs at that level, taking into consideration
 - the vital industries within the solar energy sector
 - different types of economies in developing and developed countries;
 - extent of reforms required in teachers/trainers preparations and curriculum updating
 - 2.5 Identify and analyse promising practices and initiatives in the TVET sector in terms of
 - the potential of improving the existing career pathways and workforce mobility through the “greening of skills” (*i.e., from low skilled into medium; medium into high-skilled*);
 - competency building to enable entry into new industry/sectors;
 - 2.6 Propose competency model/s (industry-based) required in occupations within the energy sector, elaborating the ways to build up green skills and competencies through top-up skills/up-skilling or new skill development programmes, both for new jobs and/or in existing occupations that have to be “greened”
 - 2.7 Formulate recommendations for action

The Final Output shall be written in English, up to 30 pages (approximately 15,000 words), excluding annexures, references.

c. Procedure

The Work will progress in close collaboration with the programme staff of UNESCO-UNEVOC. A first draft of the paper shall be submitted to UNESCO-UNEVOC by the Contractor by 22 May 2015 for comments and feedback by the Centre's programme staff. The Contractor will incorporate revisions and amendments proposed by UNESCO-UNEVOC. The final version of the Work shall be submitted by 31 May 2015. The paper is intended to form part of a discussion paper series to be organized and published by UNESCO-UNEVOC.

The contractor shall ensure that the level of English of the final draft is of high standard and adapted to a wide range of technical and non-technical audiences.

All rights related to the services provided by the contractor under this contract, including rights of ownership and copyright are vested in UNESCO, which alone holds all rights of use.

At the end of the assignment, the contractor will provide a detailed invoice of the work provided.

II. PROPOSAL

a. Content of the proposal

The proposal is expected to contain

- An overview of the plan for organizing the work stating clearly the significant role of TVET in meeting the skills needs in the renewable energy / energy efficiency fields.
- Information on the skills needs at TVET level in RE/EE (i.e., solar energy -solar thermal, PV power generation)
- An overview of potential case studies that can be drawn and included in the paper
- An indicative Table of contents
- An indicative fee
- A declaration that the contractor is able to complete the task within the given time frame
- A declaration of eligibility based on the criteria below

(The Proposal should not exceed more than 2,500 words)

Proposals are invited from institutions or a consortium of experts/researchers.

Required qualifications are:

- At least 1 of the experts/team members must possess a minimum of 7-10 years of experience in research, education and training
- Good knowledge of skills and qualifications needs in the renewable energy and energy efficiency sectors
- Relevant experience in country situational analysis and policy reviews related to energy impact to education and training
- Willingness to comply with a strict timeframe

b. Timeframe

- Submission of Proposal by 20 April 2015
- Submission of the Final Draft of Manuscript by 31 May 2015

Please submit to UNESCO-UNEVOC International Centre:

c/o Ms. Ken Barrientos

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